

20. (New) A method for producing the biochip of claim 1, comprising spotting the binding agent for binding the probes to the plate at positions where the probes are to be spotted; and spotting the probes on the plate at positions where the binding agent is spotted.--

Becond.

REMARKS

These remarks are in response to the Office Action mailed July 7, 2000. Claims 1 to 15 are pending. Claims 4 to 15 stand withdrawn from consideration as directed to a non-elected invention. New claims 16 to 20, which depend from claim 1 and, therefore, expressly contain each and every element and limitation of claim 1 have been added. Accordingly, upon entry of the amendment, claims 1 to 3 and 16 to 20 are under examination.

Regarding the Amendments

Claims 1 to 3 have been amended to address several informalities of the claim language. In particular, claim 1 has been amended in order to further clarify that the claim is directed to a product, a biochip. Claims 2 and 3 have been amended to insert the term "consisting of" in order to conform the claims to a Markush style claim. Claim 2 also has been amended in order to correct the lack of antecedent basis for the term "material." Thus, as the claim amendments were made to address informalities they do not add new matter.

Regarding the New Claims

Support for new claims 16 to 20 can be found throughout the specification. In particular, claims 16 to 18, are supported, for example, at page 7, lines 17-19, which discloses that probes include DNA, RNA and protein. Claims 19 and 20, directed to methods for producing the biochip of claim 1 are supported, for example, at page 5, lines 1-11. Applicants note that, as claims 19 and 20 depend from claim 1, examination of these claims with elected claims 1 to 3 would not constitute an undue burden upon the Examiner and, as such, respectfully request entry and examination thereof. Thus, as claims 16 to 20 are supported by the specification they do not add new matter.

In sum, as the claim amendments were made to address informalities and the new claims are supported by the specification, no new matter has been added. Accordingly, Applicants respectfully request entry of the amendments and new claims. Applicants respectfully request reconsideration of the present application.

I. REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

The rejection of claims 1 to 3 under 35 U.S.C. §112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention is respectfully traversed. The Examiner indicates that it is unclear whether claims 1 to 3 are directed to a product or process; that the recitation of “the material” in claim 2 lacks proper antecedent basis; and that the recitation of “comprising” in claims 2 and 3 is open language and that it is unclear what members comprise the group.

As set forth above, Applicants have amended claims 1 to 3 in order to address each of the Examiner’s grounds for rejection. In particular, claim 1, as amended, is clearly directed to a product; claims 2 and 3, as amended, recite proper Markush claim language; and claim 2, as amended, does not lack antecedent basis in the recitation of “material.” Thus, in view of the amendments, claims 1 to 3 are clear and definite and, as such, Applicants respectfully request that the rejections under 35 U.S.C. §112, second paragraph, be withdrawn.

II. REJECTIONS UNDER 35 U.S.C. §102(a) and (e)

The rejection of claims 1-3 under 35 U.S.C. §102(e) as allegedly anticipated by Beattie (U.S. Patent No. 5,843,767) is respectfully traversed. The Examiner indicates that Beattie allegedly describes “a biochip comprising probes spotted on a plate at a plurality of positions wherein a binding agent is spotted at the plurality of positions where the probes are spotted.” As to claims 2 and 3, Beattie allegedly describes “the biochip of claim 1 wherein the plate is a silicone wafer” and “wherein the binding reagent is silylation-coating,” respectively.

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration (In re Spada, 15 USPQ 2d 1655 (Fed. Cir. 1990), In re Bond, 15 USPQ 2d 1566 (Fed. Cir. 1990).

Applicants submit that claims 1 to 3 are not anticipated by Beattie (U.S. Patent No. 5,843,767). Claim 1 and depending claims 2 and 3 are directed to a biochip comprising probes spotted on a plate at a plurality of positions wherein a binding agent used for binding the probes to the plate is locally spotted at positions where the probes are spotted. In contrast to the biochip of claim 1, the chip described by Beattie does not have binding agent locally spotted at positions where the probes are spotted. Rather, the binding agent is distributed over the entire surface of the glass wafer (see, for example, column 13, lines 51-64). Thus, as Beattie do not describe the biochip of claims 1 to 3, claims 1 to 3 are not anticipated by Beattie. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. §102(e) over U.S. Patent No. 5,843,767 be withdrawn.

As to new claims 16 to 20, these claims depend from claim 1, which for the reasons discussed above, is not anticipated by Beattie. Accordingly, as claims 16 to 20 depend from a claim that is not anticipated by Beattie, these claims also are not anticipated by Beattie (U.S. Patent No. 5,843,767).

The rejection of claims 1 to 3 under 35 U.S.C. §102(e) as allegedly anticipated by Winkler *et al.* (U.S. Patent No. 6,040,193) is respectfully traversed. The Examiner indicates that Winkler *et al.* allegedly describe “a biochip comprising probes spotted on a plate at a plurality of positions wherein a binding agent is spotted at the plurality of positions wherein the probes are spotted.” As to claims 2 and 3, Winkler *et al.* allegedly describe “the biochip of claim 1 wherein the plate is glass” and “wherein the binding reagent is silylation-coating,” respectively.

Applicants submit that claims 1 to 3 are not anticipated by Winkler *et al.* (U.S. Patent No. 6,040,193). As discussed above, claims 1 to 3 are directed to a biochip comprising probes spotted on a plate at a plurality of positions wherein a binding agent used for binding the probes to the plate is locally spotted at positions where the probes are spotted. In contrast to the claimed biochip, the chip described by Winkler *et al.* does not have binding agent locally spotted at positions where the probes are spotted. Rather, the entire surface of the substrate glass chip is derivatized via silanation, and then coupled to a molecule including a spacer, a reactive group and a photolabile protective group (see, for example, column 23, lines 26-56). Thus, as with Beattie discussed above, Winkler *et al.* also do not describe a biochip in which the binding agent

is locally spotted at positions where the probes are spotted. Accordingly, as Winkler *et al.* do not describe the biochip of claims 1 to 3, claims 1 to 3 are not anticipated by Winkler *et al.* and, as such, Applicants respectfully request that the rejection under 35 U.S.C. §102(e) over U.S. Patent No. 6,040,193 be withdrawn.

As to new claims 16 to 20, these claims depend from claim 1, which for the reasons discussed above, is not anticipated by Winkler *et al.* Accordingly, as claims 16 to 20 depend from a claim that is not anticipated by Winkler *et al.*, these claims also are not anticipated by Winkler *et al.* (U.S. Patent No. 6,040,193).

The rejection of claims 1 to 3 under 35 U.S.C. §102(a) as allegedly anticipated by Tadashi *et al.* (EP 0 895 082 A2) is respectfully traversed. The Examiner indicates that Tadashi *et al.* allegedly describe a biochip of claim 1, claim 2 (wherein the plate is glass) and claim 3 (wherein the binding agent is silylation coating).

The subject application claims priority to Japanese application no. 341604/1998, filed December 1, 1998, which was prior to the March 2, 1999, publication of the cited Tadashi *et al.* patent application. Submitted herewith is an English translation of the previously filed certified copy of Japanese priority application no. 341604/1998. Submitted concurrently herewith is an executed statement under 37 CFR §1.55 that the English translation of the previously filed copy of the Japanese priority application is accurate. Accordingly, the claim to priority is perfected under 35 U.S.C. §119(b) and, pursuant to M.P.E.P. §706.02(b)(E), Applicants respectfully request that the rejection under 35 U.S.C. §102(a) be withdrawn.

CONCLUSION

In summary, for the reasons set forth herein, Applicants maintain that claims 1 to 3 and 16 to 20 clearly and patentably define the invention, respectfully request that the Examiner reconsider the various grounds set forth in the Office Action, and respectfully request the allowance of the claims that are now pending.

If the Examiner would like to discuss any of the issues raised in the Office Action, Applicants' representative can be reached at (858) 678-5070.

The extension of time fees set forth in 37 CFR §1.17(a) is submitted herewith. Please charge any additional fees, or make any credits, to Deposit Account No. 06-1050.

Respectfully submitted,

Date: _____

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